

L Number	Hits	Search Text	DB	Time stamp
-	20	goetz-werner-k.in.	USPAT;	2004/08/13
	20	90002 11021102	US-PGPUB;	16:12
			EPO; JPO;	
			IBM TDB	
_	0	camras-cichael-d.in.	USPAT;	2004/08/13
		· ·	US-PGPUB;	16:12
			EPO; JPO;	13.12
			IBM TDB	
_	27	camras-michael-d.in.	USPAT;	2004/08/13
	2,	Came as me on a certain	US-PGPUB;	16:12
			EPO; JPO;	10.12
	1		IBM TDB	
_	23	chen-changhua.in.	USPAT;	2004/08/13
		onon onangnaaran.	US-PGPUB;	16:13
			EPO; JPO;	10:10
			IBM TDB	
_	8	christenson-gina-l.in.	USPAT;	2004/08/13
		CHILD COMBON GAME I. III.	US-PGPUB;	16:13
			EPO; JPO;	10.13
			IBM TDB	.
_	8	kern-scott-r.in.	USPAT;	2004/08/13
		Rein Scott 1.1n.	US-PGPUB;	16:13
			EPO; JPO;	10.15
			IBM TDB	1
_	25	kuo-chihping.in.	USPAT;	2004/08/13
	2.5	kuo chimping.in:	US-PGPUB;	16:13
			EPO; JPO;	10.15
			IBM TDB	
_	7	martin-paul-scott.in.	USPĀT;	2004/08/13
-	1	martin-paul Scott.in.	US-PGPUB;	16:13
	1		EPO; JPO;	10.13
			IBM TDB	
_	58	steigerwald-daniel-a.in.	USPAT;	2004/08/13
_]	Stergerward-danier-a.in.	US-PGPUB;	16:13
			EPO; JPO;	10.13
			IBM TDB	
_	30	kern-r-scott.in.	USPAT;	2004/08/13
]	Kein i beecc.in.	US-PGPUB;	16:13
			EPO; JPO;	10020
			IBM TDB	
_	79	(goetz-werner-k.in. camras-michael-d.in.	USPAT;	2004/08/13
	1	chen-changhua.in. christenson-gina-l.in.	US-PGPUB;	16:13
		kern-scott-r.in. kuo-chihping.in.	EPO; JPO;	
	j	martin-paul-scott.in.	IBM TDB	İ
		steigerwald-daniel-a.in.		
	1	kern-r-scott.in.) and (light adj emit\$4		
	-	adi diode)	1	
_	47	,	USPAT;	2004/08/13
	1	chen-changhua.in. christenson-gina-l.in.	US-PGPUB;	16:13
		kern-scott-r.in. kuo-chihping.in.	EPO; JPO;	
	1	martin-paul-scott.in.	IBM TDB	
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")		
_	45	(((goetz-werner-k.in.	USPAT;	2004/08/13
		camras-michael-d.in. chen-changhua.in.	US-PGPUB;	16:13
		christenson-gina-l.in. kern-scott-r.in.	EPO; JPO;	
		kuo-chihping.in. martin-paul-scott.in.	IBM TDB	
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		†
		adj diode)) and ("GaN")) and (active adj		
	1	(plate or layer or region))		
	1	(place or layer or region))	1	<u> </u>

	· · · · · · · · · · · · · · · · · · ·			***************************************
-	38	((((goetz-werner-k.in.	USPAT;	2004/08/13
		camras-michael-d.in. chen-changhua.in.	US-PGPUB;	16:13
		christenson-gina-l.in. kern-scott-r.in.	EPO; JPO;	
		kuo-chihping.in. martin-paul-scott.in.	IBM_TDB	
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
		(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
	İ	or (p adj type))		
-	11	((((goetz-werner-k.in.	USPAT;	2004/08/13
		camras-michael-d.in. chen-changhua.in.	US-PGPUB;	16:13
	İ	christenson-gina-l.in. kern-scott-r.in.	EPO; JPO;	
		kuo-chihping.in. martin-paul-scott.in.	IBM TDB	
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
		(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
-				
	1050	or (p adj type))) and "II" and "III"	IICDATE.	2004/08/12
-	1252	(light adj emit\$4 adj diode) and	USPAT;	2004/08/13
		("n-type" or (n adj type)) and (("p-type"	US-PGPUB;	16:13
		or (p adj type)) with ("GaN" or (gallium	EPO; JPO;	
		adj nitride)))	IBM_TDB	2004/00/22
-	36	((light adj emit\$4 adj diode) and	USPAT;	2004/08/13
		("n-type" or (n adj type)) and (("p-type"	US-PGPUB;	16:14
		or (p adj type)) with ("GaN" or (gallium	EPO; JPO;	
1		adj nitride)))) and (("GaN" or (gallium	IBM_TDB	
		adj nitride)) with concentration with		
		(chang\$4 or vari\$5))		
-	1	"20040075097"	USPAT;	2004/08/13
			US-PGPUB;	16:14
			EPO; JPO;	
			IBM_TDB	
-	5	("5747832" "5753939" "5804839" "5987047" "	60 89A58"). PN	.2004/08/13
			US-PGPUB;	16:14
			EPO; JPO;	
			IBM_TDB	
-	128	goetz-werner-k.in. camras-michael-d.in.	USPĀT;	2004/08/13
		chen-changhua.in. christenson-gina-l.in.	US-PGPUB;	16:14
		kern-scott-r.in. kuo-chihping.in.	EPO; JPO;	
1		martin-paul-scott.in.	IBM TDB	
1		steigerwald-daniel-a.in. kern-r-scott.in.	-	
_	35	(((light adj emit\$4 adj diode) and	USPAT;	2004/08/13
}	1	("n-type" or (n adj type)) and (("p-type"	US-PGPUB;	16:14
-		or (p adj type)) with ("GaN" or (gallium	EPO; JPO;	
		adj nitride)))) and (("GaN" or (gallium	IBM TDB	
		adj nitride)) with concentration with		
1		(chang\$4 or vari\$5))) not ("20040075097"		
		(("5747832" "5753939" "5804839" "5987047"	"6005258"\ E	N.)
		(goetz-werner-k.in. camras-michael-d.in.	0000200 / . F	,
i		chen-changhua.in. christenson-gina-l.in.		
	1	kern-scott-r.in. kuo-chihping.in.		
		martin-paul-scott.in.		
		steigerwald-daniel-a.in.	TIG D A III	2004/08/12
-	433	kélnightsaditemnt\$ adisa6688300r\$(baser	USPAT;	2004/08/13
		udj5d4dd2) \$ and \usep804p39-\$r.dpdad9r	US-PGPUB;	16:15
		type200406E509argingidr) variation or	EPO; JPO;	
		chang\$4 or increas\$4 or decreas\$4) with	IBM_TDB	
	1	concentration)		

```
(((light adj emit$ adj diode) or (laser
                                              USPAT;
                                                          2004/08/13
                                              US-PGPUB;
adj diode)) and (((p-type) or (p adj
                                                           16:22
                                              EPO; JPO;
type)) with (varying or variation or
chang$4 or increas$4 or decreas$4) with
                                              IBM TDB
concentration)) not ((goetz-werner-k.in.
camras-michael-d.in. chen-changhua.in.
christenson-gina-l.in. kern-scott-r.in.
kuo-chihping.in. martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) (((light adj emit$4 adj
diode) and ("n-type" or (n adj type)) and
(("p-type" or (p adj type)) with ("GaN"
or (gallium adj nitride)))) and (("GaN"
or (gallium adj nitride)) with
concentration with (chang$4 or vari$5)))
"20040075097"
(("5747832"|"5753939"|"5804839"|"5987047"| 16005258"). 引N.)
((((((goetz-werner-k.in.
camras-michael-d.in. chen-changhua.in.
christenson-gina-l.in. kern-scott-r.in.
kuo-chihping.in. martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) and (light adj emit$4
adj diode)) and ("GaN")) and (active adj
(plate or layer or region))) and
("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
substrate and (contact or electrode))
((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").|PN.)
and (light adj emit$4 adj diode) and
("n-type" or (n adj type)) and ("p-type"
or (p adj type))) ((US-6657300-$ or
US-5747832-$ or US-5804839-$).did. or
(US-20040075097-$).did.) ((((light adj
emit$4 adj diode) and ("n-type" or (n adj
type)) and (("p-type" or (p adj type))
with ("GaN" or (gallium adj nitride))))
```

with ("GaN" or (gallium adj nitride)))
and (("GaN" or (gallium adj nitride))
with concentration with (chang\$4 or
vari\$5))) not ("20040075097"
(("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.)
(goetz-werner-k.in. camras-michael-d.in.
chen-changhua.in. christenson-gina-l.in.
kern-scott-r.in. kuo-chihping.in.
martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) ((US-6657300-\$ or
US-5747832-\$ or US-5804839-\$).did. or
(US-20040075097-\$).did.))) and (substrate
and (contact\$4 or electrode))))

_	169	((((light adj emit\$ adj diode) or (laser	USPAT;	2004/08/13
	105	adj diode)) and (((p-type) or (p adj	US-PGPUB;	16:15
	}	type)) with (varying or variation or	EPO; JPO;	
		chang\$4 or increas\$4 or decreas\$4) with	IBM TDB	
		concentration)) not ((goetz-werner-k.in.	_	
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) (((light adj emit\$4 adj		
		diode) and ("n-type" or (n adj type)) and		
		(("p-type" or (p adj type)) with ("GaN"		
		or (gallium adj nitride)))) and (("GaN"		
	}	or (gallium adj nitride)) with		
		concentration with (chang\$4 or vari\$5)))		
		"20040075097"		<u>l</u>
		(("5747832" "5753939" "5804839" "5987047"	"6005258").1	N.)
		((((((goetz-werner-k.in.		
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		<pre>kern-r-scott.in.) and (light adj emit\$4 adj diode)) and ("GaN")) and (active adj</pre>		
		(plate or layer or region))) and		
		(prate or rayer or region))) and ("p-type" or (n adj type)) and ("p-type"		
		or (p adj type))) and "II" and "III") and		
		substrate and (contact or electrode))		
		((("5747832" "5753939" "5804839" "5987047"	1"6005258")	DM)
		and (light adj emit\$4 adj diode) and	, 0003230 ,	1,
		("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
		(US-20040075097-\$).did.) ((((light adj		
		emit\$4 adj diode) and ("n-type" or (n adj		
		type)) and (("p-type" or (p adj type))		
		with ("GaN" or (gallium adj nitride))))		
		and (("GaN" or (gallium adj nitride))		
-	11	with (conetnewathem-with. (chang\$4 or	USPAT;	2004/08/13
		wamras)micheel (d200400B5097hanghua.in.	US-PGPUB;	16:18
		¢%15342630H+G5763939H "60046365t25987647"	"B00\$2580).1	N.)
		kgoethikpingrik.imartamrpauhisheet-dnin.	IBM_TDB	
		shemgehwaddudammelehrintenson-gina-l.in.		
		kern-scottt.in.)kandchlhghngadn.emit\$4		
		mdjtdmopewl-andtt"GaN")) and (active adj		
		<pre>\$p&agerwaldagemier-aegmon))) and</pre>		
		këmntypecoor.in.adj(USp6657and-\$"prtype"		
		US-Sp4ad32typer) Wsafid04839-AnddIdIIOr and		
		\$UBs20at60afd97e\$htdcd.pr)eandtrsdb\$trate	W2005050"	10004 (00 (10
-	4	4nd5743aBact3875B9a9ect58d4839)]"52d7047"		
		and and ight (gdilenmtad) adjtdidde) and	US-PGPUB;	16:18
		\$Ubstypee end(n(adfitype))emmd\$4%padype"	EPO; JPO;	
	1	bayep)adj type))	IBM_TDB	2004/09/12
•	4	(US-6657300-\$ or US-5747832-\$ or	USPAT; US-PGPUB	2004/08/13
		US-5804839-\$).did. or	US-FGFUB	10.10
_	35	(US-20040075097-\$).did. ((((light adj emit\$4 adj diode) and	USPAT;	2004/08/13
-	33	((((light ad) emits4 ad) diode; and ("p-type" or (n adj type)) and (("p-type"	US-PGPUB;	16:18
		or (p adj type)) with ("GaN" or (gallium	EPO; JPO;	-0.10
		adj nitride)))) and (("GaN" or (gallium	IBM TDB	
		adj nitride)) with concentration with		
		(chang\$4 or vari\$5))) not ("20040075097"		
		(("5747832" "5753939" "5804839" "5987047"	"6005258") -	N.)
		(goetz-werner-k.in. camras-michael-d.in.		,
		chen-changhua.in. christenson-gina-l.in.		
		kern-scott-r.in. kuo-chihping.in.		
		martin-paul-scott.in.		1,4
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
		(US-20040075097-\$).did.))) and (substrate		
		and (contact\$4 or electrode)) /16/04 4:09:02 PM Page 4		

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2004/08/13
((((light adj emit$ adj diode) or (laser
                                              USPAT;
                                              US-PGPUB;
                                                           16:19
adj diode)) and (((p-type) or (p adj
                                              EPO; JPO;
type)) with (varying or variation or
chang$4 or increas$4 or decreas$4) with
                                              IBM TDB
concentration)) not ((goetz-werner-k.in.
camras-michael-d.in. chen-changhua.in.
christenson-gina-l.in. kern-scott-r.in.
kuo-chihping.in. martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) (((light adj emit$4 adj
diode) and ("n-type" or (n adj type)) and
(("p-type" or (p adj type)) with ("GaN"
or (gallium adj nitride)))) and (("GaN"
or (gallium adj nitride)) with
concentration with (chang$4 or vari$5)))
"20040075097"
(("5747832"|"5753939"|"5804839"|"5987047"| "6005258"). HN.)
((((((goetz-werner-k.in.
camras-michael-d.in. chen-changhua.in.
christenson-gina-l.in. kern-scott-r.in.
kuo-chihping.in. martin-paul-scott.in.
steigerwald-daniel-a.in.
kern-r-scott.in.) and (light adj emit$4
adj diode)) and ("GaN")) and (active adj
(plate or layer or region))) and
("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
substrate and (contact or electrode))
((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").|PN.)
and (light adj emit$4 adj diode) and
("n-type" or (n adj type)) and ("p-type"
or (p adj type))) ((US-6657300-$ or
US-5747832-$ or US-5804839-$).did. or
(US-20040075097-$).did.) ((((light adj
emit$4 adj diode) and ("n-type" or (n adj
type)) and (("p-type" or (p adj type))
with ("GaN" or (gallium adj nitride))))
and (("GaN" or (gallium adj nitride))
with concentration with (chang$4 or
vari$5))) not ("20040075097"
(("5747832"|"5753939"|"5804839"|"5987047"||"6005258"). \mbox{$\sharp$N.}
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(goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-\$ or US-5747832-\$ or US-5804839-\$).did. or (US-20040075097-\$).did.))) and (substrate and (contact\$4 or electrode))))) and ("GaN" or (gallium adj nitride)) and substrate and ((active or emit\$4) adj layer)) and (((light adj emit\$ adj diode) or (laser adj diode))).ti. and (((p-type) or (p adj type)) with (varying or variation or chang\$4 or increas\$4 or decreas\$4) with concentration)

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USPAT;
  ((((((light adj emit$ adj diode) or
                                                            2004/08/13
  (laser adj diode)) and (((p-type) or (p
                                               US-PGPUB;
                                                            16:19
  adj type)) with (varying or variation or
                                               EPO; JPO;
                                               IBM_TDB
  chang$4 or increas$4 or decreas$4) with
  concentration)) not ((goetz-werner-k.in.
  camras-michael-d.in. chen-changhua.in.
  christenson-gina-l.in. kern-scott-r.in.
  kuo-chihping.in. martin-paul-scott.in.
  steigerwald-daniel-a.in.
  kern-r-scott.in.) (((light adj emit$4 adj
  diode) and ("n-type" or (n adj type)) and
  (("p-type" or (p adj type)) with ("GaN"
  or (gallium adj nitride)))) and (("GaN"
  or (gallium adj nitride)) with
  concentration with (chang$4 or vari$5)))
  "20040075097"
  (("5747832"|"5753939"|"5804839"|"5987047"| 6005258"). N.)
  {((((((goetz-werner-k.in.
  camras-michael-d.in. chen-changhua.in.
  christenson-gina-l.in. kern-scott-r.in.
  kuo-chihping.in. martin-paul-scott.in.
  steigerwald-daniel-a.in.
  kern-r-scott.in.) and (light adj emit$4
  adj diode)) and ("GaN")) and (active adj
  (plate or layer or region))) and
  ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
  substrate and (contact or electrode))
  ((("5747832"|"5753939"|"5804839"|"5987047"||"6005258").PN.)
  and (light adj emit$4 adj diode) and
  ("n-type" or (n adj type)) and ("p-type"
  or (p adj type))) ((US-6657300-$ or
  US-5747832-$ or US-5804839-$).did. or
  (US-20040075097-$).did.) ((((light adj
  emit$4 adj diode) and ("n-type" or (n adj
  type)) and (("p-type" or (p adj type))
with ("GaN" or (gallium adj nitride))))
  and (("GaN" or (gallium adj nitride))
  with concentration with (chang$4 or
  vari$5))) not ("20040075097"
  (("5747832"|"5753939"|"5804839"|"5987047"||6005258"). HN.)
  (goetz-werner-k.in. camras-michael-d.in.
  chen-changhua.in. christenson-gina-l.in.
  kern-scott-r.in. kuo-chihping.in.
  martin-paul-scott.in.
  steigerwald-daniel-a.in.
  kern-r-scott.in.) ((US-6657300-$ or
  US-5747832-\$ or US-5804839-\$).did. or
  (US-20040075097-$).did.))) and (substrate
  and (contact$4 or electrode))))) and
  ("GaN" or (gallium adj nitride)) and
  substrate and ((active or emit$4) adj
                                                            2004/08/13
 lemer$4 and diodeghanddjubmfratedandiode)
                                               USPAT;
                                               US-PGPUB;
                                                            17:12
  of((pasypeadaddiddyer).br.(pnddj(typeypdj)
  bayép) adyit ppécontath oracyengrode)) and
                                               EPO; JPO;
                                               IBM TDB
  váváz$5onrochehg$$4nezr2nconae$$retion)
  decreas$4) with concentration)) not
  (((((light adj emit$4 adj diode) and
  ("n-type" or (n adj type)) and (("p-type"
  or (p adj type)) with ("GaN" or (gallium
  adj nitride)))) and (("GaN" or (gallium
  adj nitride)) with concentration with
  (chang$4 or vari$5))) not ("20040075097"
  (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.)
  (goetz-werner-k.in. camras-michael-d.in.
  chen-changhua.in. christenson-gina-l.in.
  kern-scott-r.in. kuo-chihping.in.
  martin-paul-scott.in.
  steigerwald-daniel-a.in.
  kern-r-scott.in.) ((US-6657300-$ or
  US-5747832-$ or US-5804839-$).did. or
/US=20040075097=$).did.))) and (substrate 8/And (contact34 PMr eleagrode)))
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Search History

-	24	((emit\$4 adj diode) and substrate and	USPAT;	2004/08/13
		((((p-type) adj layer) or (p adj type adj	US-PGPUB;	17:13
		layer)) with (contact or electrode)) and	EPO; JPO;	
		((var\$5 or chang\$4) near2 concentration))	IBM_TDB	
	,	not ((goetz-werner-k.in.		
]	·	camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) "20040075097"		
		(("5747832" "5753939" "5804839" "5987047"	"6005258").F	N.)
		((((((goetz-werner-k.in.	,	·
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
		(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) and "II" and "III") and		
		substrate and (contact or electrode))		!
		((("5747832" "5753939" "5804839" "5987047"	""6005258"\	DN)
		and (light adj emit\$4 adj diode) and	0003230 /.	1.,
	,	("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
		(US-20040075097-\$).did.) ((((light adj		
		emit\$4 adj diode) and ("n-type" or (n adj		
	!	type)) and (("p-type" or (p adj type))		
	i	with ("GaN" or (gallium adj nitride))))		
	:	and (("GaN" or (gallium adj nitride))		
	_	withghonadntemitomnwithj(dhedg\$4oor	USPAT;	2004/08/13
_	•	wiimghonaancemiiomnylan (dmang, 400) wargas phinoing adg4dnode97 and	US-PGPUB;	16:59
ì		(('CBABG32"or5vab939"ad580eb3ehtra92047"		
]			IBM TDB	14. /
		\$gmet#(perppe) koin(pcamiasymethaedid.in.	TDM_TDB	
	٦	շեցոະ¢hanghua.in. christenson-gina-l.in. Kethighotadդ.emitkաngchdhpdmgdem.or	USPAT;	2004/08/13
_	3	maitantende mittalindiode)) and	US-PGPUB;	16:59
		margmn-pmmrtsngtadjndiode), and sterbengaldedawae\$5a.adj concentration)	EPO; JPO;	10.00
		kema-f-peoppeinor (puse657980) sadj	IBM TDB	
		May57478n0t\$ (gmeU3-weMa689k\$indid. or	1011_100	
		wayer#yonot5 (goeus-wedhensk5;indid. or ¢um:200400na097d\$indidhen)-chadghaabshrate		
			1	
		ahdistensent@inarlelactkeda>\$\$\$ptt-r.in.		
		kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in.		
		stelgerwald-daniel-a.in. kern-r-scott.in.)		
[_	37	"LED" and substrate and ((((p-type) adj	USPAT;	2004/08/13
-] 3/	layer) or (p adj type adj layer)) with	US-PGPUB;	17:12
		(contact or electrode)) and ((var\$5 or	EPO; JPO;	1
		chang\$4) near2 concentration)	IBM TDB	
_	233	"LED" and substrate and ((((p-type)) or	USPAT;	2004/08/13
-	233	(p adj type)) with (contact or	US-PGPUB;	17:13
		(p adj type)) with (contact of electrode)) and ((var\$5 or chang\$4) near2	EPO; JPO;	* / · + 5
			IBM TDB	
1		concentration)	TDM IDD	

-	10 ("LED" and substrate and ((((p-type) adj USPAT; 2004/08/13 layer) or (p adj type adj layer)) with US-PGPUB; 17:15
	(contact or electrode)) and ((var\$5 or EPO; JPO;
	chang\$4) near2 concentration)) not IBM_TDB
	((goetz-werner-k.in. camras-michael-d.in.
	chen-changhua.in. christenson-gina-l.in.
	kern-scott-r.in. kuo-chihping.in.
	martin-paul-scott.in.
	steigerwald-daniel-a.in.
	kern-r-scott.in.) "20040075097"
	(("5747832" "5753939" "5804839" "5987047" "6005258").FN.)
	camras-michael-d.in. chen-changhua.in.
	christenson-gina-l.in. kern-scott-r.in.
	kuo-chihping.in. martin-paul-scott.in.
	steigerwald-daniel-a.in.
	kern-r-scott.in.) and (light adj emit\$4
	adj diode)) and ("GaN")) and (active adj
	(plate or layer or region))) and
	("n-type" or (n adj type)) and ("p-type"
	or (p adj type))) and "II" and "III") and substrate and (contact or electrode))
	((("5747832" "5753939" "5804839" "5987047" "6005258").PN.)
	and (light adj emit\$4 adj diode) and
	("n-type" or (n adj type)) and ("p-type"
	or (p adj type))) ((US-6657300-\$ or
	US-5747832-\$ or US-5804839-\$).did. or
	(US-20040075097-\$).did.) (((((light adj
:	emit\$4 adj diode) and ("n-type" or (n adj
:	type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride))))
	and (("GaN" or (gallium adj nitride))
	with concentration with (chang\$4 or
	vari\$5))) not ("20040075097"
	(("5747832" "5753939" "5804839" "5987047" "6005258"). 引N.)
	(goetz-werner-k.in. camras-michael-d.in.
	chen-changhua.in. christenson-gina-l.in.
	kern-scott-r.in. kuo-chihping.in.
	martin-paul-scott.in. steigerwald-daniel-a.in.
	kern-r-scott.in.) ((US-6657300-\$ or
	US-5747832-\$ or US-5804839-\$).did. or
	(US-20040075097-\$).did.))) and (substrate
	and (contact\$4 or electrode)))
	((((((light adj emit\$ adj diode) or
	(laser adj diode)) and (((p-type) or (p
	adj type)) with (varying or variation or
	chang\$4 or increas\$4 or decreas\$4) with concentration)) not ((goetz-werner-k.in.
	camras-michael-d.in. chen-changhua.in.
	christenson-gina-l.in. kern-scott-r.in.
	kuo-chihping.in. martin-paul-scott.in.
	steigerwald-daniel-a.in.
	kern-r-scott.in.) (((light adj emit\$4 adj
	diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN"
	or (gallium adj nitride)))) and (("GaN"
	or (gallium adj nitride)) with
	concentration with (chang\$4 or vari\$5)))
	"20040075097"
	(("5747832" "5753939" "5804839" "5987047" "6005258").EN.)
	((((((goetz-werner-k.in.
	camras-michael-d.in. chen-changhua.in.
	christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in.
	steigerwald-daniel-a.in.
	kern-r-scott.in.) and (light adj emit\$4
	adj diode)) and ("GaN")) and (active adj
	(plate or layer or region))) and
	("n-type" or (n adj type)) and ("p-type"
	or (p adj type))) and "II" and "III") and
Search History	substrate and (contact or electrode)) 8/ {6/0374783207"5953938a985804839" "5987047" "6005258").PN.)
_	and (light adj emit\$4 adj diode) and
::\APPS\EAST\Wor	rkspadestppg1440.wspadj type)) and ("p-type"
	or (p adj type))) ((US-6657300-\$ or

.

	72-1	(Urmpu and makes to 1 / / / 1	HCDAM.	2004/00/22
-	181	("LED" and substrate and (((p-type)) or	USPAT; US-PGPUB;	2004/08/13 17:15
		<pre>(p adj type)) with (contact or electrode)) and ((var\$5 or chang\$4) near2</pre>	EPO; JPO;	17:13
		concentration)) not ((goetz-werner-k.in.	IBM TDB	
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) "20040075097"		
		(("5747832" "5753939" "5804839" "5987047"	"6005258").F	N.)
		((((((goetz-werner-k.in.		
		camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
		(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
	į	or (p adj type))) and "II" and "III") and		
		substrate and (contact or electrode)) ((("5747832" "5753939" "5804839" "5987047"	1"6005258")	DNI \
		and (light adj emit\$4 adj diode) and	0003230).	FIV. /
	1	("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or	,	
		(US-20040075097-\$).did.) (((((light adj		
		emit\$4 adj diode) and ("n-type" or (n adj		
		type)) and (("p-type" or (p adj type))		
		<pre>with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride))</pre>		
		with concentration with (chang\$4 or		
		vari\$5))) not ("20040075097"		
		(("5747832" "5753939" "5804839" "5987047"	"6005258").F	N.)
		(goetz-werner-k.in. camras-michael-d.in.		
		chen-changhua.in. christenson-gina-l.in.		
		kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
		(US-20040075097-\$).did.))) and (substrate		
		and (contact\$4 or electrode)))		
		<pre>((((((light adj emit\$ adj diode) or (laser adj diode)) and (((p-type) or (p</pre>		
		(laser adj diode)) and (((p-type) of (p adj type)) with (varying or variation or		
		chang\$4 or increas\$4 or decreas\$4) with		
		concentration)) not ((goetz-werner-k.in.		
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit\$4 adj		
		diode) and ("n-type" or (n adj type)) and		
		(("p-type" or (p adj type)) with ("GaN"		
		or (gallium adj nitride)))) and (("GaN"		
		or (gallium adj nitride)) with		
		concentration with (chang\$4 or vari\$5)))		
		"20040075097" (("5747832" "5753939" "5804839" "5987047"	"6005259"\ "	N)
		(("5747832" "5753939" "5804839" "5987047" ((((((goetz-werner-k.in.	0003238").	14.)
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.	ĺ	
		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and		
		(plate of layer of legion))) and ("p-type" ("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) and "II" and "III") and		
		substrate and (contact or electrode))		
Soarch Ui	tory	<u>///("5747832" "5753939" "5804839" "5987047"</u>	1"6005258")	PN.)
Search His	tory 8	fand (light ad) emitty adjultude) and		
a.\ z n n n n \ -	cm\ '	("n-type" or (n adj type)) and ("p-type"		
C:\APPS\EA	rsi/worksp	aess(poadi440pebb) ((US-6657300-\$ or US-5747832-\$ or US-5804839-\$).did. or		
		12 0/1/032 7 02 08 0001003 9/1010. Of		

```
(("LED" and substrate and (((p-type)) or
                                                                  USPAT:
                                                                              2004/08/13
                                                                  US-PGPUB;
                                                                              17:16
                     (p adj type)) with (contact or
                                                                  EPO; JPO;
                    electrode)) and ((var$5 or chang$4) near2
                                                                  IBM TDB
                    concentration)) not ((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) "20040075097"
                     (("5747832"|"5753939"|"5804839"|"5987047"|16005258"). #N.)
                     (((((((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) and (light adj emit$4
                    adj diode)) and ("GaN")) and (active adj
                     (plate or layer or region))) and
                    ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
                    substrate and (contact or electrode))
                     ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258") PN.)
                    and (light adj emit$4 adj diode) and
                     ("n-type" or (n adj type)) and ("p-type"
                    or (p adj type))) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
                     (US-20040075097-$).did.) ((((light adj
                    emit$4 adj diode) and ("n-type" or (n adj
                    type)) and (("p-type" or (p adj type))
                    with ("GaN" or (gallium adj nitride))))
and (("GaN" or (gallium adj nitride))
                    with concentration with (chang$4 or
                    vari$5))) not ("20040075097"
                     (("5747832"|"5753939"|"5804839"|"5987047"|"6005258"). 引N.)
                     (goetz-werner-k.in. camras-michael-d.in.
                    chen-changhua.in. christenson-gina-l.in.
                    kern-scott-r.in. kuo-chihping.in.
                    martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
                     (US-20040075097-$).did.))) and (substrate
                    and (contact$4 or electrode)))
                     ((((((light adj emit$ adj diode) or
                     (laser adj diode)) and (((p-type) or (p
                    adj type)) with (varying or variation or
                     chang$4 or increas$4 or decreas$4) with
                    concentration)) not ((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                     christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                     steigerwald-daniel-a.in.
                    kern-r-scott.in.) (((light adj emit$4 adj
                    diode) and ("n-type" or (n adj type)) and
                     (("p-type" or (p adj type)) with ("GaN"
                     or (gallium adj nitride)))) and (("GaN"
                     or (gallium adj nitride)) with
                     concentration with (chang$4 or vari$5)))
                     "20040075097"
                     (("5747832"|"5753939"|"5804839"|"5987047"|"6005258"). HN.)
                     ((((((goetz-werner-k.in.
                     camras-michael-d.in. chen-changhua.in.
                     christenson-gina-l.in. kern-scott-r.in.
                     kuo-chihping.in. martin-paul-scott.in.
                     steigerwald-daniel-a.in.
                     kern-r-scott.in.) and (light adj emit$4
                     adj diode)) and ("GaN")) and (active adj
                     (plate or layer or region))) and
                    ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
                     substrate and (contact or electrode))
                  8 and 11gh: Qdj Pemits 4 and 1 diode) and
Search History
                     ("n-type" or (n adj type)) and ("p-type"
C:\APPS\EAST\Workspaces\P07d1448p@bb) ((US-6657300-$ or
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US-5747832-\$ or US-5804839-\$).did. or

7****		THE POLICE OF TH	TIGD?	2004/00/12
-	66	((("LED" and substrate and ((((p-type))	USPAT;	2004/08/13 17:17
		or (p adj type)) with (contact or electrode)) and ((var\$5 or chang\$4) near2	US-PGPUB; EPO; JPO;	11.11
	l	concentration)) not ((goetz-werner-k.in.	IBM TDB	
		camras-michael-d.in. chen-changhua.in.	_	
		christenson-gina-l.in. kern-scott-r.in.		
}	1	kuo-chihping.in. martin-paul-scott.in.		
+		steigerwald-daniel-a.in.		
		kern-r-scott.in.) "20040075097" (("5747832" "5753939" "5804839" "5987047"	"6005258") E	N \
		((((((goetz-werner-k.in.	0000230 7:1	14.7
		camras-michael-d.in. chen-changhua.in.		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
		<pre>kern-r-scott.in.) and (light adj emit\$4 adj diode)) and ("GaN")) and (active adj</pre>		
		(plate or layer or region))) and		
		("n-type" or (n adj type)) and ("p-type"		
		or (p adj type))) and "II" and "III") and		
		substrate and (contact or electrode))		
		((("5747832" "5753939" "5804839" "5987047"	"6005258").	PN.)
		and (light adj emit\$4 adj diode) and		
		("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
		(US-20040075097-\$).did.) ((((light adj		
-		emit\$4 adj diode) and ("n-type" or (n adj		
		type)) and (("p-type" or (p adj type))		
		with ("GaN" or (gallium adj nitride))))		
		<pre>and (("GaN" or (gallium adj nitride)) with concentration with (chang\$4 or</pre>		
		vari\$5))) not ("20040075097"		
		(("5747832" "5753939" "5804839" "5987047"	"6005258").E	N.)
		(goetz-werner-k.in. camras-michael-d.in.	-	
		chen-changhua.in. christenson-gina-l.in.		
		kern-scott-r.in. kuo-chihping.in.		
		<pre>martin-paul-scott.in. steigerwald-daniel-a.in.</pre>		
		kern-r-scott.in.) ((US-6657300-\$ or		
		US-5747832-\$ or US-5804839-\$).did. or		
j		(US-20040075097-\$).did.))) and (substrate		
1		<pre>and (contact\$4 or electrode)))</pre>		
		((((((light adj emit\$ adj diode) or		
		<pre>(laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or</pre>		
İ		chang\$4 or increas\$4 or decreas\$4) with		
		concentration)) not ((goetz-werner-k.in.		
		camras-michael-d.in. chen-changhua.in.		
1		christenson-gina-l.in. kern-scott-r.in.		
1		kuo-chihping.in. martin-paul-scott.in.		
		steigerwald-daniel-a.in.		
ł		kern-r-scott.in.) (((light adj emit\$4 adj diode) and ("n-type" or (n adj type)) and		
l		(("p-type" or (p adj type)) with ("GaN"		
		or (gallium adj nitride)))) and (("GaN"		
		or (gallium adj nitride)) with		
		concentration with (chang\$4 or vari\$5)))		
		"20040075097"	#600E3E0#\ *	INT \
		(("5747832" "5753939" "5804839" "5987047"	0003238").	IN .)
		<pre>(((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in.</pre>		
		christenson-gina-l.in. kern-scott-r.in.		
		kuo-chihping.in. martin-paul-scott.in.		
1		steigerwald-daniel-a.in.		
		kern-r-scott.in.) and (light adj emit\$4		
		adj diode)) and ("GaN")) and (active adj		
		<pre>(plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type"</pre>		
		or (p adj type))) and "II" and "III") and		
ļ		substrate and (contact or electrode))		
		bubbliate and (contact of offered,)		
loomeh 772 1-	<u> </u>	111"5747832"1"5753939"1"5804839"1"5987047"	1"6005258")	PN.)
Search Hist	ory 8	<u>/(("5747832" "5753939" "5804839" "5987047"</u> /and ⁰⁴ light: adj ^P Mmit\$ ^{Ra} Aajidiode) and	<u>"6005258")</u>	PN.)
)	_	111"5747832"1"5753939"1"5804839"1"5987047"	<u> "6005258")</u> .	PN.)

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USPAT;
                    ((("LED" and substrate and ((((p-type))
                                                                            2004/08/13
                    or (p adj type)) with (contact or
                                                                US-PGPUB;
                                                                            17:18
                    electrode)) and ((var$5 or chang$4) near2
                                                                EPO; JPO;
                                                                IBM_TDB
                    concentration)) not ((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) "20040075097"
                    (("5747832"|"5753939"|"5804839"|"5987047"||6005258"). \(\mathbf{P}\).)
                    ((((((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) and (light adj emit$4
                    adj diode)) and ("GaN")) and (active adj
                    (plate or layer or region))) and
                    ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and
                    substrate and (contact or electrode))
                    ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.)
                    and (light adj emit$4 adj diode) and
                    ("n-type" or (n adj type)) and ("p-type"
                    or (p adj type))) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
                    (US-20040075097-$).did.) ((((light adj
                    emit$4 adj diode) and ("n-type" or (n adj
                    type)) and (("p-type" or (p adj type))
                    with ("GaN" or (gallium adj nitride))))
                    and (("GaN" or (gallium adj nitride))
                    with concentration with (chang$4 or
                    vari$5))) not ("20040075097"
                    (("5747832"|"5753939"|"5804839"|"5987047"||"6005258"). nn.)
                    (goetz-werner-k.in. camras-michael-d.in.
                    chen-changhua.in. christenson-gina-l.in.
                    kern-scott-r.in. kuo-chihping.in.
                    martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
                    (US-20040075097-$).did.))) and (substrate
                    and (contact$4 or electrode)))
                    ((((((light adj emit$ adj diode) or
                    (laser adj diode)) and (((p-type) or (p
                    adj type)) with (varying or variation or
                    chang$4, or increas$4 or decreas$4) with
                    concentration)) not ((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) (((light adj emit$4 adj
                    diode) and ("n-type" or (n adj type)) and
                    (("p-type" or (p adj type)) with ("GaN"
                    or (gallium adj nitride)))) and (("GaN"
                    or (gallium adj nitride)) with
                    concentration with (chang$4 or vari$5)))
                    "20040075097"
                    (("5747832"|"5753939"|"5804839"|"5987047"| 16005258"). 引N.)
                    ((((((goetz-werner-k.in.
                    camras-michael-d.in. chen-changhua.in.
                    christenson-gina-l.in. kern-scott-r.in.
                    kuo-chihping.in. martin-paul-scott.in.
                    steigerwald-daniel-a.in.
                    kern-r-scott.in.) and (light adj emit$4
                    adj diode)) and ("GaN")) and (active adj
                    (plate or layer or region))) and
                    ("n-type" or (n adj type)) and ("p-type"
                    or (p adj type))) and "II" and "III") and
                    substrate and (contact or electrode))
                  Search History
                    ("n-type" or (n adj type)) and ("p-type"
C:\APPS\EAST\Workspaces\P03di440pebb) ((US-6657300-$ or
                    US-5747832-$ or US-5804839-$).did. or
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